**AGRICULTURAL FLOOD DAMAGE**

**Background Information**

1. How many years have you operated a farm at this location?

Years

2. Does part of your farm flood frequently enough to require a change in cropping patterns?

1. No 2. Yes

3. How many acres are there in this frequently flooded area?

Acres

**Crop Distribution and Production Practices**

4. Crop Distribution/Yield Without Project:

In the area below, please describe the cropping patterns for the upper and lower areas of your farm under existing flood conditions. The lower areas are those areas subject to flooding frequently enough to cause a change in cropping patterns.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **EXISTING CONDITONS** | | | | |
|  | LOWER AREA | | UPPER AREA | |
| Crop | Acres | Yield  in Bushels or Bales | Acres | Yield  in Bushels or Bales |
| Cotton |  |  |  |  |
| Soybeans |  |  |  |  |
| Rice |  |  |  |  |
| Wheat |  |  |  |  |
| Grain Sorghum (Milo) |  |  |  |  |
| Corn |  |  |  |  |
| Alfalfa |  |  |  |  |
| Hay |  |  |  |  |
| Pasture |  |  |  |  |
| Fallow |  |  |  |  |
| Other  Specify \_\_\_\_\_\_\_\_\_\_\_ |  |  |  |  |
| Other  Specify \_\_\_\_\_\_\_\_\_\_\_ |  |  |  |  |

5. How many times since you first operated this farm has flooding caused delayed planting or replanting?

Times

6. How many times since you first operated this farm has flooding made you unable to harvest a crop?

Times

7. Please indicate the usual date for each stage of crops production activity.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Crop | Usual Beginning Plant Date for Production Practices | | | Last date to Plant |
| Date to Begin Land Preparation | Date to Begin Planting | Date to Begin Harvesting |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**Crops Damage**

8. Please fill in the following regarding the most recent flood.

8a. Date that flooding began: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (month, day, year)

8b. Depth of flooding at deepest point: \_\_\_\_\_\_\_\_\_\_\_\_ (feet)

8c. Longest duration of flooding at any part of your yard: \_\_\_\_\_\_\_\_\_\_\_\_\_ (days)

| 9. DAMAGE TO CROPS AND PASTURE FROM FLOODING | | | | | |
| --- | --- | --- | --- | --- | --- |
| Crop | No. of Acres | Yield/Acre After Flood | If flooding made it too late to plant this crop, what did you plant instead? | What additional production costs, if any, did you have because of the flooding? | What production costs did you NOT have because of the flooding? |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

Farm Property Damage

10. Please use the table below to identify the amount of damage for each non-crop item for the most recent flood event. Do not include any property related to fish production.

|  |  |  |  |
| --- | --- | --- | --- |
| Item | Unit | Units Damaged | Total Estimated Damage in $ |
|
| Farm Roads | Linear Feet |  |  |
| Drainage Ditches | Linear Feet |  |  |
| Fences | Linear Feet |  |  |
| Land Leveling | Acres |  |  |
| Land Damage | Acres |  |  |
| Equipment | Pieces of Equipment |  |  |
| Farm Buildings | Number of  Buildings |  |  |
| Stored Feeds | Bushels |  |  |
| Pasture | Acres |  |  |
| Other |  |  |  |

**Fishpond Damage**

11. Do you have any fishponds?

\_\_\_\_\_Yes \_\_\_\_\_No

If no, the questionnaire is completed.

12. If yes, have you ever incurred damage to your fishponds as a result of flooding?

\_\_\_\_\_Yes \_\_\_\_\_No

If no, the questionnaire is completed.

If yes, 13. What was the date of this last damaging flood to your fishponds?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

14. If yes, how many acres of fishpond area were damaged?

Acres

15. Please list below the amount of dollar losses or damages during the most recent flooding that damaged your fishponds?

|  |  |
| --- | --- |
| **CATEGORY** | **($) LOSSES OR DAMAGES TO AQUACULTURE**  **PROPERTY FROM FLOODING** |
| Fish that Were Ready for Market |  |
| Pre-market Fish |  |
| Levees |  |
| Feed for Fish |  |
| Equipment |  |
| Miscellaneous |  |
| **Total Damages** |  |

**COASTAL STORM DAMAGE**

**Background Information**

1. Is this your primary residence?
2. NO

YES

1a. If not, is it a… (CIRCLE ONE ANSWER)

* 1. Second Home
  2. Rental
  3. Other (PLEASE SPECIFY)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. How many years have you owned this house?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ YEARS

3. How old is your home?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ YEARS OLD

Approximately how many times has your home had coastal storm damage since you’ve lived here, including Hurricane \_\_(Name)\_\_\_\_\_\_ or the coastal storm of \_\_(date)\_\_\_\_\_\_?

\_\_\_\_\_\_ TIMES

5. Where is your home situated? (CHECK ONE)

\_\_\_\_ Oceanfront, if so how many feet is your home from the ocean at mean high water line?

\_\_\_\_\_\_\_ Feet

\_\_\_\_ First row behind oceanfront

\_\_\_\_ Ocean block (Within a block of the ocean)

\_\_\_\_ On a sound or back bay

\_\_\_\_ Interior, (More than a block from the ocean bay, or sound)

Structural and Outside Property Data

6. Not counting your attic, garage, or the under portion of an elevated building how many square feet of living area are in your home? (If you are unsure, please give the dimensions.)

\_\_\_\_\_\_\_\_\_\_\_ SQUARE FEET or (\_\_\_\_\_\_\_FEET X \_\_\_\_\_\_\_\_\_\_ FEET)

7. What type of foundation does your home have?

(PLEASE CIRCLE ONE ANSWER AND INDICATE NUMBER OF FEET, WHERE APPROPIATE)

1. Slab

2. Piling - If piling, how many feet do they go below ground? \_\_\_\_\_\_ Feet

3. How many feet do they elevate the structure above ground? \_\_\_\_\_\_ Feet

* 1. Concrete Block –

If so, How many feet do they go below ground? \_\_\_\_\_\_ Feet

* 1. Other type of foundation, please describe. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8. If you have an elevated building, is there an under-the-house enclosure?

(CIRCLE YES OR NO)

YES NO

If yes, please indicate the size of enclosed area devoted to each of the following uses:

8a. Finished living area: \_\_\_\_\_\_\_\_\_\_\_ SQUARE FEET or (\_\_\_\_\_\_\_FEET X \_\_\_\_\_\_\_\_\_\_ FEET)

8b. Utility space \_\_\_\_\_\_\_\_\_\_\_ SQUARE FEET or (\_\_\_\_\_\_\_FEET X \_\_\_\_\_\_\_\_ FEET)

8c. Garage: \_\_\_\_\_\_\_\_\_\_\_ SQUARE FEET or (\_\_\_\_\_\_\_FEET X \_\_\_\_\_\_\_\_\_\_ FEET)

8d. Other: Please describe: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_SQUARE FEET or (\_\_\_\_\_\_\_FEET X \_\_\_\_\_\_\_\_\_\_ FEET)

9. Do you have an attached garage that is not under the house?

(CIRCLE YES OR NO) YES NO

9a. If so, indicate the size of the attached garage.

\_\_\_\_\_\_\_\_\_\_\_\_SQUARE FEET or (\_\_\_\_\_\_\_FEET X \_\_\_\_\_\_\_\_\_\_ FEET)

10. Do you have a detached garage that is not under the house?

(CIRCLE YES OR NO) YES NO

10a. If so, indicate the size of the detached garage.

\_\_\_\_\_\_\_\_\_\_\_\_SQUARE FEET or (\_\_\_\_\_\_\_FEET X \_\_\_\_\_\_\_\_\_\_ FEET)

11. What category best describes the style of this building?

(CIRCLE ONE ANSWER)

1. One-Story 5. 1-1/2 Story Finished 9. 3-1/2 Story Finished

2. Two-Story 6. 1-1/2 Story Unfinished 10. 3-1/2 Story Unfinished

3. Three-Story 7. 2-1/2 Story Finished 11. Bi-Level

4. Split Level 8. 2-1/2 Story Unfinished

12. Not counting any basement, attic, or garage, how many square feet of living area are in your home? (If respondent is unsure, ask for the dimensions and calculate.)

\_\_\_\_\_\_\_\_\_\_\_ SQUARE FEET

13. Does your home have a basement? (CIRCLE)

1. NO (Skip to 14)

2. YES

13a. If yes, please indicate the total basement area, in square feet, and the amount that is finished and unfinished? (If respondent is unsure, ask for the dimensions and calculate.)

TOTAL BASEMENT AREA: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ SQUARE FEET

FINISHED BASEMENT AREA: \_\_\_\_\_\_\_\_\_\_\_\_\_ SQUARE FEET

UNFINISHED BASEMENT AREA: \_\_\_\_\_\_\_\_\_\_ SQUARE FEET

14. Do you have a carport? (CIRCLE)

1. NO

2. YES

14a. How large is the carport in square feet? (If respondent is unsure, ask for the dimensions and calculate.)

\_\_\_\_\_\_\_\_\_ SQUARE FEET

15. What category best describes the heating and cooling system in this building?

(CIRCLE ONE ANSWER FOR MOST PROMINENT SYSTEM)

Heating Only:

1. Forced Air 6. Ceiling, Radiant Electric

2. Gravity Furnace 7. Baseboard, Electric

3. Floor Furnace 8. Baseboard, Hot Water

4. Wall Furnace 9. Radiators, Hot Water

(No Heat Ducts) 10. Radiators, Steam

5. Floor, Radiant Hot Water

Heating and Cooling:

11. Warmed and Cooled Air

12. Heat Pump System

Cooling Only:

13. Evaporative Water Cooler (Single or Short Ducts)

14. Refrigerated, with Condenser and Ducts

16. What is the primary exterior wall covering on this building?

(CIRCLE ONE ANSWER)

1. Plywood 4. Siding 7. Common Brick

2. Hardboard 5. Shingle 8. Face Brick

Sheets 6. Masonry 9. Stone

3. Stucco Veneer 10. Concrete Block

17. What is the primary roof covering of this building? (CIRCLE ONE ANSWER)

1. Composition Shingle 5. Concrete Tile 10. Plastic Tile

2. Built-up Rock 6. Clay Tile

3. Wood Shingle 7. Galvanized Metal

(Embedded in Asphalt) 8. Slate

4. Wood Shake 9. Composition Roll

18. How many fireplaces are in this home? \_\_\_\_\_\_\_\_\_ FIREPLACES

\_\_\_\_\_\_\_ FIREPLACES

19. How many square feet of each of the following types of porches are there in this home? (If you are unsure of square feet, please give dimensions.)

Slab \_\_\_\_\_\_\_\_\_\_\_ SQUARE FEET

Or ( \_\_\_\_ Feet X \_\_\_ Feet)

Slab with Roof \_\_\_\_\_\_\_\_\_\_\_ SQUARE FEET

Or ( \_\_\_\_ Feet X \_\_\_ Feet)

Wood Deck \_\_\_\_\_\_\_\_\_\_\_ SQUARE FEET

Or ( \_\_\_\_ Feet X \_\_\_ Feet)

Enclosed Slab Porch \_\_\_\_\_\_\_\_\_\_\_ SQUARE FEET

Or ( \_\_\_\_ Feet X \_\_\_ Feet)

Enclosed Wood Porch \_\_\_\_\_\_\_\_\_\_\_ SQUARE FEET

Or ( \_\_\_\_ Feet X \_\_\_ Feet)

20. Do you have an elevator in your home?

\_\_\_ Yes \_\_\_ No

21. How high is the first floor of your building above the lowest adjacent grade?

\_\_\_\_\_\_\_\_FEET

22. How high is the first floor of your building above the where flood water would first enter your building (from considering windows and pipes into the foundation?

\_\_\_\_\_\_\_\_FEET

23. Please note any long-term flood proofing method, which may be used on this property.

**(Please circle yes or no for each column.)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Long-Term Flood Proofing Methods** | **Original Construction** | **Retrofitted**  **(after original construction)** | Was Method Effective? |
| **Elevated Construction** | **YES NO** | **YES NO** | **YES NO** |
| **Reinforced piling** | **YES NO** | **YES NO** | **YES NO** |
| **Extended piling** | **YES NO** | **YES NO** | **YES NO** |
| **Bracing** | **YES NO** | **YES NO** | **YES NO** |
| **Sealant or Shield**  **What type?**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | **YES NO** | **YES NO** | **YES NO** |

24. Please indicate 1) which utilities are elevated in your home in order to prevent flood damage and 2) indicate whether the elevating was effective:

**(Please circle yes or in both columns.)**

|  |  |  |
| --- | --- | --- |
| Utility | **Elevated** | **Was method effective?** |
| Air Conditioner | Yes No | Yes No N/A |
| Furnace | Yes No | Yes No N/A |
| Washer/Dryer | Yes No | Yes No N/A |
| Water Heater | Yes No | Yes No N/A |
| Other: | Yes No | Yes No N/A |

25. Other than in the under-the-house enclosure, do you have a garage on this property? (CIRCLE)

1. NO (Skip to 26)

2. YES

25a. Is the garage attached to the structure? (CIRCLE)

1. NO

2. YES

25b. How large is the garage in square feet? (If you are unsure, please give the dimensions.)

\_\_\_\_\_\_\_\_\_ SQUARE FEET Or ( \_\_\_\_ Feet X \_\_\_ Feet)

26. How high is the first floor of your building above the lowest adjacent grade?

\_\_\_\_\_\_\_\_FEET

**COSTS AND DAMAGES**

**The next group of questions is to determine damages to different types of property from the Hurricane \_\_(NAME)\_ or the coastal storm of ( DATE ).**

27. Please indicate how high (in feet and inches) did any standing water in your home reach relative to the first floor of your home?

\_\_\_\_\_\_FEET; \_\_\_\_\_\_INCHES (ABOVE, BELOW) FIRST FLOOR LEVEL

[CIRCLE]

28. Please indicate how high in feet and inches did any waves reach relative to the first floor of your home?

\_\_\_\_\_\_FEET; \_\_\_\_\_\_INCHES (ABOVE, BELOW) FIRST FLOOR LEVEL

[CIRCLE]

29. Please indicate the primary source of damage to your home, excluding wind damage?

(CIRCLE ONE)

1. STORM SURGE (a sudden flow of water associated with a storm event)
2. WAVE RUNUP (the rush of water up a structure, associated with the breaking of a wave)
3. INUNDATION (the buildup of water overflow or ponding)
4. EROSION
5. OTHER \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

30. Did the flooding from this storm make it necessary for you or other occupants of your home to stay in temporary residence due to evacuation or while your home was being repaired?

(CIRCLE)

1. NO (Skip to 31)

2. YES

30a. How many days did you or other occupants of your home to spend in temporary residence due to the evacuation or while flood damage to your home was being repaired?

\_\_\_\_\_ DAYS

30b. How much money did your household spend beyond your normal travel expense, on travel and lodging due to your evacuation(s) during Hurricane \_(Name)\_?

\_\_\_\_\_\_ DOLLARS

30c. Due to your evacuation, how much money did your household spend on food in excess of what you normally would have spent?

\_\_\_\_\_\_ DOLLARS

31. Was there erosion damage to your lot?

31a. If so, how many square feet of your lot were eroded?

\_\_\_\_\_\_\_ Square Feet?

31b. What percentage of the lot directly under your home (footprint of your home) was eroded?

\_\_\_\_\_\_\_ Percent

31c. What were the total costs to repair the erosion damage to your lo/t and your home?

$ \_\_\_\_\_\_\_\_\_\_

32. For each motor vehicle, (including sedan, vans, sports utility, sports cars, station wagons, pickup trucks, boats, jet skis, golf carts, and motorcycles) located at this residence during the flood, please indicate the dollar value, whether or not it was moved, the dollar amount of damage to the vehicle, if any, and the level, in feet and inches, that the flood water reached above the bottom of the vehicle’s wheels.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Motor Vehicle  Category and Year  (Categories include: sedan, vans, sports utility, sports cars, station wagons, pickup trucks, boats, jet skis, golf carts, and motorcycles) | Dollar Value | Was it Moved to a safe location?  (CIRCLE YES OR NO) | Dollar Damage | Depth of Water from the Bottom of the Vehicle |
| Vehicle 1: | $\_\_\_\_\_\_\_ | YES NO | $\_\_\_\_\_\_\_ | \_\_\_\_\_\_ FEET |
| Vehicle 2: | $\_\_\_\_\_\_\_ | YES NO | $\_\_\_\_\_\_\_ | \_\_\_\_\_\_ FEET |
| Vehicle 3: | $\_\_\_\_\_\_\_ | YES NO | $\_\_\_\_\_\_\_ | \_\_\_\_\_\_ FEET |

The following questions are to determine the dollar cost and unpaid hours for repair and cleanup of your home, and repair, replacement, and cleanup to the contents of your home that resulted from Hurricane \_(NAME)\_.

33. What was the cost of the structural damage to your home? (Structural damage is defined as damage to any building components, including foundation, walls, floors, windows, roof, electrical systems, heating and cooling systems, plumbing, attached carpeting, attached shelves and cabinets, and built-in equipment and appliances.)

$\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ DOLLAR COSTS OF STRUCTURE DAMAGE

33a. Which of the following is the primary source of your structure damage repair costs?

(Circle one)

1. Contractor estimate (before repairs)
2. Contractor invoice (after repairs)
3. Your own assessment
4. Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

33b. What was the dollar cost to you for labor and supplies to clean up your home after the hurricane?

$\_\_\_\_\_\_\_\_

33c. What was the total number of unpaid hours that you and others spent on repair and cleanup to your home?

\_\_\_\_\_\_ UNPAID HOURS

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 34. | | Please itemize your total structural damages and any additional time that was spent on repairs other than paid labor hours into the following categories. | | | | |
|  | |  | | | | |
| **Portion of Structure** | | **Value of Damages** | | |
|  | | In % of total  Or  in Dollars | | Unpaid Hours to repair or install, **in addition** to $ spent |
| 1. Built-in shelves and appliances | | \_\_\_\_\_% | $\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_ UNPAID HOURS |
| 2. Electrical | | \_\_\_\_\_% | $\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_ UNPAID HOURS |
| 3. Plumbing | | \_\_\_\_\_% | $\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_ UNPAID HOURS |
| 4. Exterior walls, windows, doors (painting included), and roofing | | \_\_\_\_\_% | $\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_ UNPAID HOURS |
| 5. Footings and foundation | | \_\_\_\_\_% | $\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_ UNPAID HOURS |
| 6. Interior doors and walls (painting included) | | \_\_\_\_\_% | $\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_ UNPAID HOURS |
| 7. Interior floors, carpet and ceilings | | \_\_\_\_\_% | $\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_ UNPAID HOURS |
| 8. Mechanical systems - heat, A/C, sump pump, built-in vacuum | | \_\_\_\_\_% | $\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_ UNPAID HOURS |
| 1. Porches and decks | | \_\_\_\_\_% | $\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_ UNPAID HOURS |
| 1. Chimneys and fireplaces | | \_\_\_\_\_% | $\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_ UNPAID HOURS |
| 12. Garages and outbuildings | | \_\_\_\_\_% | $\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_ UNPAID HOURS |
| 13. Outside property and landscaping | | \_\_\_\_\_% | $\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_ UNPAID HOURS |
| 14. Septic, sewer, and water systems | | \_\_\_\_\_% | $\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_ UNPAID HOURS |
| Total | | 100 % | $\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_ UNPAID HOURS |

35. What was the dollar damage to the contents of your home, garage, and shed, excluding motor vehicles? (Only include content replacement and repairs. Do not include repairs to the structure of the house).

$\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**(Content damage refers to damage to personal property kept inside the home or the garage that is not permanently affixed to the home.)**

36. What was the total number of unpaid hours that you and others spent on repair of appliances, furniture, and other contents of your home?

\_\_\_\_\_\_ UNPAID HOURS

37. How much, if anything, did each of the following cost you in actual dollar expenditures as a result of Hurricane (NAME) ?

a) Costs for moving furniture and other belongings? $\_\_\_\_\_\_\_\_\_\_\_

b) Costs for storing furniture and other belongings? $\_\_\_\_\_\_\_\_\_\_\_

c) Vandalism, looting, or theft costs? $\_\_\_\_\_\_\_\_\_\_\_

d) Costs from flooding-related medical problems? $\_\_\_\_\_\_\_\_\_\_\_

e) Any other costs due to Hurricane \_\_\_\_\_\_\_\_. $\_\_\_\_\_\_\_\_\_\_\_

Describe: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ $\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ $\_\_\_\_\_\_\_\_\_\_\_

38. Is there a swimming pool on your lot?

\_\_\_\_Yes \_\_\_\_No, Go to Question 39

38a. Was your swimming pool damaged by Hurricane (NAME) ?

\_\_\_\_Yes \_\_\_\_No, Go to Question 39

38b. What were your repair costs from Hurricane (NAME) associated with your swimming pool? (If the pool was destroyed, please estimate the replacement cost.)

$\_\_\_\_\_\_\_\_\_\_\_\_\_ SWIMMING POOL REPAIR COSTS

38c. What are the dimensions of your swimming pool?

Size Range of Depth

\_\_\_ feet X \_\_\_feet \_\_\_\_\_feet at shallowest point \_\_\_\_\_\_ feet at deepest point

38d. Is your swimming pool on the oceanfront side of your home?

\_\_\_\_\_\_Yes \_\_\_\_\_\_No

39. List any additional features, such as hot tub, tile works, etc. that may have been damaged by Hurricane (NAME) .

Item $ Damage CIRCLE N/A, IF NOT APPLICABLE

HOT TUB $\_\_\_\_\_\_\_\_\_\_ N/A

TILE WORK $\_\_\_\_\_\_\_\_\_\_ N/A

DECKING $\_\_\_\_\_\_\_\_\_\_ N/A

OTHER (SPECIFY\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) $\_\_\_\_\_\_\_\_\_\_ N/A

**Flood Warning and Response**

40. Just before (DATE) storm, how did you first become aware that flooding might reach your business? **(CIRCLE ONE ANSWER)**

1. E-MAIL
2. TEXT MESSAGE
3. TWITTER
4. WEBSITE
5. TV
6. RADIO
7. TELEPHONE BY A PUBLIC OR EMERGENCY WORKER
8. TELEPHONE BY OTHER
9. FACE TO FACE BY PUBLIC OR EMERGENCY WORKER
10. FACE TO FACE BY OTHER
11. LOUDSPEAKER
12. SIREN
13. C.B., HAM RADIO or POLICE SCANNER
14. NEWSPAPER
15. OBSERVING THE CREEK OR RIVER WATER LEVELS
16. OTHER \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

41. How many hours were there between the time you first became aware that flooding might reach your property until when the water actually reached your property?

\_\_\_\_\_\_ HOURS

42. What actions, if any, did you take to safeguard your business property immediately prior to flooding and what were the dollar damages prevented by each action?

**(PLEASE CIRCLE YES OR NO FOR EACH ACTION LISTED BELOW AND INDICATE THE DOLLARS DAMAGES PREVENTED FOR EACH ACTION.)**

|  |  |  |
| --- | --- | --- |
| **Damage Preventive Action** | **Took Preventive Action** | **Dollar Damage Prevented**  **(PLEAS FILL IN $ DAMAGES PREVENTED OR CIRCLE DK FOR DON’T KNOW.)** |
| 1. Moved contents to higher ground | YES NO | $\_\_\_\_\_\_\_\_\_\_ OR DK |
| 2. Elevated contents to a higher spot in the building | YES NO | $\_\_\_\_\_\_\_\_\_\_ OR DK |
| 3. Shut off electrical equipment | YES NO | $\_\_\_\_\_\_\_\_\_\_ OR DK |
| 4. Sandbagged the outside of the building | YES NO | $\_\_\_\_\_\_\_\_\_\_ OR DK |
| 5. Used another type of temporary barrier | YES NO | $\_\_\_\_\_\_\_\_\_\_ OR DK |
| 6. Moved vehicles to higher ground | YES NO | $\_\_\_\_\_\_\_\_\_\_ OR DK |
| 7. Other action \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | YES NO | $\_\_\_\_\_\_\_\_\_\_ OR DK |
| 8. None | YES NO |  |

43. Emergency Measures/Plans:

41a. What emergency measures/plans, if any, would you take to reduce damage if you were forewarned of another coastal storm?

43b. What is your estimated cost to implement these emergency measures?

$

43c. How much time (in man hours) is required to implement these emergency measures?

MAN HOURS

**NONRESIDENTIAL**

**Background Information**

1. Briefly describe the major purpose of this business facility? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What is the total number of buildings on site \_\_\_\_\_ Buildings
2. Number of years business has been at this location \_\_\_\_\_ Years

4. Please indicate the number of full time, part time, and total employees.

\_\_\_\_\_\_\_ Full Time \_\_\_\_\_\_\_\_ Part Time \_\_\_\_\_\_\_\_Total Employees

5. How many shifts are there in your daily operation?

\_\_\_\_\_\_ Shifts per day

6. While at this location, approximately how many times has this facility experienced flood damage, including the flooding from ­­­­­­­the (date) floods?

\_\_\_\_\_\_\_\_\_ Times

7. Briefly describe any permanent flood mitigation measures that have been implemented to reduce potential flood damage.

8. How many days, if any, was this business closed due to the (date) flood?

\_\_\_\_\_\_\_\_\_\_ DAYS CLOSED

8a. Did your business set up temporary quarters at another location because of the (date) floods? (CIRCLE)

1. NO

2. YES

8b. How much additional money did the flood cost your business in increased operational expenses, such as temporary quarters, additional transportation, communications, or storage expenses?

$\_\_\_\_\_\_\_\_\_\_\_\_ Total Additional Dollars

8c. Please describe additional costs. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Individual Building Information**

*(Questions 9-21 are to be answered for your* ***primary building only****. If there are multiple buildings at the facility, a supplemental sheet is provided that asks for similar information.)*

9. Brief description of function of the primary building and its contents:

10. Prior to the (date) floods, what was the value of all equipment

physically attached or anchored to this building, not including

the building itself? $\_\_\_\_\_\_\_\_

11. Prior to the (date) floods, what was the value of all other

equipment, furniture, supplies, raw materials, and inventory

generally stored in this building? $\_\_\_\_\_\_\_\_

12. Prior to the (date) floods, what was the value of all

vehicles generally stored at this building? $\_\_\_\_\_\_\_\_

1. Prior to the (date) flooding, what was the value of all

other equipment, supplies, and inventory stored outside of,

but in the immediate vicinity of this building? $\_\_\_\_\_\_\_\_

14. Excluding any basement or attic how many stories does this building have?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ STORIES

15. What is the average story height in this building?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ FEET

16. What year was this building constructed? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

17. What is the shape of this building? (Circle one answer.)

1. Square

2. Rectangular

3. L-shaped

4. U-shaped

5. Very Irregular

18. What is the size of your building in square feet? (If respondent is unsure, ask for the dimensions and calculate.)

\_\_\_\_\_\_\_\_\_\_\_ SQUARE FEET

19. Indicate what type of heating and cooling system is used in your building?

Heating Only:

1. Forced Air 6. Ceiling, Radiant Electric

2. Gravity Furnace 7. Baseboard, Electric

3. Floor Furnace 8. Baseboard, Hot Water

4. Wall Furnace 9. Radiators, Hot Water

(No Heat Ducts) 10. Radiators, Steam

5. Floor, Radiant Hot Water

Heating and Cooling:

11. Warmed and Cooled Air

12. Heat Pump System

Cooling Only:

13. Evaporative Water Cooler (Single or Short Ducts)

14. Refrigerated, with Condenser and Ducts

20. Does this building have a basement? (CIRCLE)

0. NO

1. YES

20a. If yes, please indicate the total basement area, and the area in square feet or dimensions of the area that is finished and unfinished? (If respondent is unsure, ask for the dimensions and calculate.)

Total Area: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Square Feet

Finished Area: \_\_\_\_\_\_\_\_\_\_\_\_\_ Square Feet

Unfinished Area: \_\_\_\_\_\_\_\_\_\_\_ Square Feet

21. Please indicate the primary construction material for the building frame.

\_\_\_Block/Brick \_\_\_Steel \_\_\_Wood \_\_\_Metal

(Check appropriate block)

22. Relative to the 1st floor elevation of the building, what is the current value of the contents and where are they located vertically? (up through 1st floor only)

|  |  |  |  |
| --- | --- | --- | --- |
| **Height (ft)** | **Equipment ($)** | **Furniture ($)** | **Inventory/products ($)** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| 0.0 ft |  |  |  |
| 1.0 ft |  |  |  |
| 3.0 ft |  |  |  |
| 6.0 ft |  |  |  |
| 8.0 ft |  |  |  |
| Total |  |  |  |

Notes to interviewer:

* Shaded areas are for buildings with a subterranean level only. Please fill in appropriate values for the depth (e.g., -1.0 ft, -3.0 ft, -6.0 ft). Leave shaded areas blank if no subterranean level exists.
* The values in the columns should be a cumulative total, starting from the lowest level of the structure.

**Physical Damage and Other Costs**

23. How high in feet and inches did the water from \_\_\_\_\_\_ (year) flood reach on the inside of this building relative to the first floor of the building?

\_\_\_\_\_\_ FEET; \_\_\_\_\_\_\_ INCHES (ABOVE, BELOW) First Floor Level

[CIRCLE]

24. Please estimate the damages to your business from past flooding events. Please give a single set of combined damages for all floors in all buildings.

|  |  |  |  |
| --- | --- | --- | --- |
| Date of the flooding event: | \_\_\_\_\_\_\_\_\_\_ | Date of the flooding event: | \_\_\_\_\_\_\_\_\_\_ |
| Contents damage estimate ($): | $\_\_\_\_\_\_\_\_\_ | Contents damage estimate ($): | $\_\_\_\_\_\_\_\_\_ |
| Structure damage estimate ($): | $\_\_\_\_\_\_\_\_\_ | Structure damage estimate ($): | $\_\_\_\_\_\_\_\_\_ |
| Number of lost business days: | \_\_\_\_\_\_Days | Number of lost business days: | \_\_\_\_\_\_Days |
| Amount of lost net income ($): | $\_\_\_\_\_\_\_\_\_ | Amount of lost net income ($): | $\_\_\_\_\_\_\_\_\_ |
| Cost of cleanup ($): | $\_\_\_\_\_\_\_\_\_ | Cost of cleanup ($): | $\_\_\_\_\_\_\_\_\_ |

25. Please indicate the replacement value and damage or costs that you attribute to each of the following items.

|  | | Replacement Value | Actual Damage or Cost |
| --- | --- | --- | --- |
| **Damage to Transportation** | |  |  |
| Rail beds and tracks | | $\_\_\_\_\_\_\_\_\_ | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Docks and loading facilities | | $\_\_\_\_\_\_\_\_\_ | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Damage to Buildings** | |  |  |
| Foundation and supports | | $\_\_\_\_\_\_\_\_\_ | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Floors (mark one)  \_\_\_Steel \_\_\_Concrete \_\_\_Wood | | $\_\_\_\_\_\_\_\_\_ | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Floor covering (mark one)  \_\_\_Ceramic \_\_\_Linoleum \_\_\_Carpet | | $\_\_\_\_\_\_\_\_\_ | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Exterior walls and insulation (mark one)  \_\_\_Metal \_\_\_Wood \_\_\_Block/brick | | $\_\_\_\_\_\_\_\_\_ | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Windows | | $\_\_\_\_\_\_\_\_\_ | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Interior walls and ceilings | | $\_\_\_\_\_\_\_\_\_ | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Doors and moldings | | $\_\_\_\_\_\_\_\_\_ | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Damage to Building Utilities**  Indicate location: B=Basement, G=Ground floor,  I=Intermediate floors, R=Roof | Replacement  Value | | (year)Flood  Actual  Damage or Cost |
| Sewer systems  \_\_\_Storm \_\_\_Industrial \_\_\_Sanitary  \_\_\_B \_\_\_G \_\_\_\_I \_\_\_R | $\_\_\_\_\_\_\_\_\_ | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Water supply systems  \_\_\_Treatment \_\_\_Pipes  \_\_\_B \_\_\_G \_\_\_\_I \_\_\_R | $\_\_\_\_\_\_\_\_\_ | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Water systems  \_\_\_Hot water \_\_\_Softening  \_\_\_B \_\_\_G \_\_\_\_I \_\_\_R | $\_\_\_\_\_\_\_\_\_ | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Communications systems  \_\_\_B \_\_\_G \_\_\_\_I \_\_\_R | $\_\_\_\_\_\_\_\_\_ | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Electric power transformers  \_\_\_Pole \_\_\_Ground | $\_\_\_\_\_\_\_\_\_ | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Electrical service entrance and meters  \_\_\_B \_\_\_G \_\_\_\_I \_\_\_R | $\_\_\_\_\_\_\_\_\_ | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Engines/generators/alternators  \_\_\_B \_\_\_G \_\_\_\_I \_\_\_R | $\_\_\_\_\_\_\_\_\_ | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Other Electrical control panels and circuit breakers  \_\_\_B \_\_\_G \_\_\_\_I \_\_\_R | $\_\_\_\_\_\_\_\_\_ | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Wiring switches, outlets, lighting  \_\_\_B \_\_\_G \_\_\_\_I \_\_\_R | $\_\_\_\_\_\_\_\_\_ | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Fuel supply  \_\_\_Oil tanks \_\_\_Gas pipes/meters  \_\_\_B \_\_\_G \_\_\_\_I \_\_\_R | $\_\_\_\_\_\_\_\_\_ | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Heating  \_\_\_Oil \_\_\_Gas \_\_\_Elect. \_\_\_Air  \_\_\_Water  \_\_\_B \_\_\_G \_\_\_\_I \_\_\_R | $\_\_\_\_\_\_\_\_\_ | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Air conditioning  \_\_\_Gas \_\_\_Electric \_\_\_Cool \_\_\_Purify \_\_\_Dehumidify  \_\_\_B \_\_\_G \_\_\_\_I \_\_\_R | $\_\_\_\_\_\_\_\_\_ | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Damage to Equipment, Appliances, and Furniture** |  | |  |
| \_\_\_Conveyors \_\_\_Elevators \_\_\_Escalators | $\_\_\_\_\_\_\_\_\_ | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Foundry furnaces and welding equipment | $\_\_\_\_\_\_\_\_\_ | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Machine tools and patterns | $\_\_\_\_\_\_\_\_\_ | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Other motors and engines | $\_\_\_\_\_\_\_\_\_ | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Compressors | $\_\_\_\_\_\_\_\_\_ | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Built-in refrigeration units | $\_\_\_\_\_\_\_\_\_ | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Hand and paint tools | $\_\_\_\_\_\_\_\_\_ | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Other equipment | $\_\_\_\_\_\_\_\_\_ | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Display cases, counters, and bins | $\_\_\_\_\_\_\_\_\_ | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Appliances  \_\_\_Oven \_\_\_Refrigerators  \_\_\_Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | $\_\_\_\_\_\_\_\_\_ | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Vehicles kept at this location | $\_\_\_\_\_\_\_\_\_ | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Damage to:** |  | |  |
| Parts/raw materials | $\_\_\_\_\_\_\_\_\_ | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Partly assembled/processed product | $\_\_\_\_\_\_\_\_\_ | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Inventory | $\_\_\_\_\_\_\_\_\_ | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **General Costs** |  | |  |
| Fighting the Flood |  | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Evacuation  \_\_\_Owner \_\_\_Tenant |  | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Number of employees out of work |  | | \_\_\_\_\_\_\_\_\_\_\_\_ Unemployed |
| Value of lost wages |  | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Removal of debris and damaged items |  | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Disinfecting, other cleaning and rehabilitation |  | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Replacement of records |  | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Loss of gross income due to interruption of business |  | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Loss of net income due to interruption of business |  | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Increased alternative operating costs |  | | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

26. Please indicate the approximate dollar value of damage from the (date) floods to the following categories:

Structure Damage = Damage to any building components, including foundation, walls, floors, doors, windows, roof, electrical system, heating and cooling systems, plumbing, attached carpeting, attached shelves and cabinets, and built-in equipment and appliances.

Content Damage = Damage to unattached equipment, supplies, raw materials, and inventory.

Vehicles and Outside Property Damage = Damage to vehicles parked on premises; damage to inventory, materials, and equipment kept outside; and damage to signs, landscaping, and parking areas.

Preventive Costs = Costs of moving contents prior to and after flooding to avoid damage, costs of flood fighting.

Clean Up Costs = Costs of labor and materials to clean up interior and outside of building.

Business Record Replacement Costs = The financial costs and unpaid hours for reconstructing business records that were damaged by the flood.

|  |  |
| --- | --- |
| **TYPE OF DAMAGE** | **AMOUNT OF COST OR DAMAGE** |
| **STRUCTURE DAMAGE** | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **CONTENT DAMAGE** | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **VEHICLE DAMAGE** | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **PREVENTIVE COSTS** | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| CLEANUP COST | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **LANDSCAPING AND OUTSIDE PROPERTY** | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **UNPAID HOURS OF TIME FOR CLEAN AND REPAIR** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ UNPAID HOURS |
| **BUSINESS RECORD REPLACEMENT COSTS** | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

27. How long did the water remain in this building?

\_\_\_\_\_\_\_\_\_\_\_\_\_ DAYS \_\_\_\_\_\_\_\_\_\_\_\_\_ HOURS

**Damage Susceptibility**

28. At what elevation, relative to the 1st floor of the building, does flood damage to **contents** begin? (+ or – ; will only be negative if there is a subterranean level) \_\_\_\_\_\_\_\_\_\_\_\_ feet

29. Please estimate the range in damage to contents at corresponding water depths above/below the building’s 1st floor elevation. (Express damage in either **$ or %** **of total value** at the lower and upper ends as well as the most likely estimate.)

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Flood**  **Depth** | **Equipment** | | | **Furniture** | | | **Inventory/products** | | |
| Lower End | Most Likely | Upper end | Lower End | Most Likely | Upper End | Lower End | Most Likely | Upper End |
| -6.0 ft |  |  |  |  |  |  |  |  |  |
| -3.0 ft |  |  |  |  |  |  |  |  |  |
| -1.0 ft |  |  |  |  |  |  |  |  |  |
| 0.0 ft |  |  |  |  |  |  |  |  |  |
| 0.5 ft |  |  |  |  |  |  |  |  |  |
| 1.0 ft |  |  |  |  |  |  |  |  |  |
| 3.0 ft |  |  |  |  |  |  |  |  |  |
| 6.0 ft |  |  |  |  |  |  |  |  |  |
| Total\* |  |  |  |  |  |  |  |  |  |

\* **Total should equal 100% in each column if you are reporting as % of total value.**

Notes to interviewer:

* Shaded areas are for buildings with a subterranean level only. Please fill in appropriate values for the depth (e.g., -1.0 ft, -3.0 ft, -6.0 ft). Leave shaded areas blank if no subterranean level exists.

30. Is there a seasonal variation in the value of inventory in this building? Yes No

If yes, what is the average total value of your inventory during the following time periods:

January – March $ April – June $

July – September $ October – December $

31. Other than the principal structures, are there any other valuable items on your property that flood waters could damage, such as not readily movable (landscaping, electrical equipment, pipes, trailers on blocks, etc.)?

|  |  |  |
| --- | --- | --- |
| **Type** | **Current Value ($)** | **Height Above Ground (ft.)** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

- Movable (cars, trucks, trailers, etc.)

|  |  |
| --- | --- |
| **Type** | **Current Value**  **($)** |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

**Flood Warning and Response**

32. Just before (date) floods, how did you first become aware that flooding might reach your business? (CIRCLE ONE ANSWER)

1. E-MAIL
2. TEXT MESSAGE
3. TWITTER
4. WEBSITE
5. TV
6. RADIO
7. TELEPHONE BY A PUBLIC OR EMERGENCY WORKER
8. TELEPHONE BY OTHER
9. FACE TO FACE BY PUBLIC OR EMERGENCY WORKER
10. FACE TO FACE BY OTHER
11. LOUDSPEAKER
12. SIREN
13. C.B., HAM RADIO or POLICE SCANNER
14. NEWSPAPER
15. OBSERVING THE CREEK OR RIVER WATER LEVELS
16. OTHER \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

32a. How many hours were there between the time you became aware that flooding might reach your business until the water actually reached your business property?

\_\_\_\_\_\_ HOURS

33. What actions, if any, did you take to safeguard your business property

immediately prior to flooding and what were the dollar damages prevented by each action?

(PLEASE CIRCLE YES OR NO FOR EACH ACTION LISTED AND INDICATE THE DOLLARS DAMAGE PREVENTED FOR EACH ACTION.)

|  |  |  |
| --- | --- | --- |
| **Damage Preventive Action** | **Took Preventive Action**  **(CIRCLE)** | **Dollar Damage Prevented**  **$\_\_\_\_ or Circle DK for Don’t Know** |
| 1. Moved contents to higher ground | Yes No | $\_\_\_\_\_\_\_\_\_ DK |
| 2. Elevated contents to a higher spot in the building | Yes No | $\_\_\_\_\_\_\_\_\_ DK |
| 3. Shut off electrical equipment | Yes No | $\_\_\_\_\_\_\_\_\_ DK |
| 4. Sandbagged the outside of the building | Yes No | $\_\_\_\_\_\_\_\_\_ DK |
| 5. Used another type of temporary barrier | Yes No | $\_\_\_\_\_\_\_\_\_ DK |
| 6. Moved vehicles to higher ground | Yes No | $\_\_\_\_\_\_\_\_\_ DK |
| 7. Other action: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Yes No | $\_\_\_\_\_\_\_\_\_ DK |
| 8. None | Yes No | $\_\_\_\_\_\_\_\_\_ DK |

34. Emergency Measures/Plans:

34a. What emergency measures/plans, if any, would you take to reduce damage if you were forewarned of eminent flooding?

34b. What is your estimated cost to implement these emergency measures?

$

34c. How much time in man hours is required to implement these emergency measures?

MAN HOURS

**PUBLIC DAMAGES AND OTHER COSTS**

1. Name of Governmental Entity: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Agency: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. Phone Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Dates of Flooding/

Coastal Storm: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. Source(s) of Flooding: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. In the table below list the damages that occurred to public property in your jurisdiction as a result of the (date) flood.

|  |  |  |
| --- | --- | --- |
| Type of Property | $ Damage | Primary Cause of Damage  (inundation, wave, erosion, etc.) |
| Buildings | $\_\_\_\_\_\_\_\_\_\_\_\_ |  |
| Equipment | $\_\_\_\_\_\_\_\_\_\_\_\_ |  |
| Vehicles | $\_\_\_\_\_\_\_\_\_\_\_\_ |  |
| Supplies | $\_\_\_\_\_\_\_\_\_\_\_\_ |  |
| Streets, highways, roads | $\_\_\_\_\_\_\_\_\_\_\_\_ |  |
| Water supply system plant and equipment  distribution system | $\_\_\_\_\_\_\_\_\_\_\_\_ |  |
| Sewage system  plant and equipment  distribution system | $\_\_\_\_\_\_\_\_\_\_\_\_ |  |
| Drainage system | $\_\_\_\_\_\_\_\_\_\_\_\_ |  |
| Bridges | $\_\_\_\_\_\_\_\_\_\_\_\_ |  |
| Docks | $\_\_\_\_\_\_\_\_\_\_\_\_ |  |
| Marinas | $\_\_\_\_\_\_\_\_\_\_\_\_ |  |
| Boardwalks | $\_\_\_\_\_\_\_\_\_\_\_\_ |  |
| Parks | $\_\_\_\_\_\_\_\_\_\_\_\_ |  |
| Other | $\_\_\_\_\_\_\_\_\_\_\_\_ |  |

7. Please list any other public cost that resulted from the flooding in your jurisdiction.

|  |  |  |
| --- | --- | --- |
| Type of Costs | $ Costs | Volunteer (unpaid hours) |
| Emergency operations and floodfighting | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_ Hours |
| Police protection | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_ Hours |
| Additional costs of water supply | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_ Hours |
| Additional costs of sewage treatment | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_ Hours |
| Additional costs of flood cleanup | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_ Hours |
| Additional costs of trash collection and disposal | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_ Hours |
| Replacement of business records | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_ Hours |
| Repairs to levee, sand dunes, or other flood or coastal protection | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_ Hours |
| Cleanup of hazard waste | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_ Hours |
| Other costs | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_ Hours |
| Total | $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_ Hours |

8. Please describe any harmful public health and other environmental effects that flooding may have caused by inundation of landfills, sewage treatment plants, or other hazardous waste sites.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

If you had a damaged sewage treatment facility in the most recent flood, please answer questions 9-13. (If not, skip to question 14.)

9. What is the capacity of the damage facility in gallons per day?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Gallons per Day

10. What is the estimated replacement cost of the plant?

$\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

11. How high did the water get above the lowest ground elevation of the plant?

\_\_\_\_\_\_\_\_\_\_\_\_\_ FEET

12. What was the repair cost to the plant?

$\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

13. How many days was the plant not operating because of the flood damage?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ DAYS

If you had a damaged WATER treatment facility in the most recent flood, please answer questions 9-13. (If not, the survey is complete.)

14. What is the capacity of the damage facility in gallons per day?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Gallons per Day

15. What is the estimated replacement cost of the plant?

$\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

16. How high did the water get above the lowest ground elevation of the plant?

\_\_\_\_\_\_\_\_\_\_\_\_\_ FEET

17. What was the repair cost to the plant?

$\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

18. How many days was the plant not operating because of the flood damage?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ DAYS

**RESIDENTIAL**

**Background and Flood History**

1. How many years have you been living at this address?

\_\_\_\_\_\_\_\_\_\_\_ years

2. Were you living at this residence during the (year) flood?

\_\_\_NO \_\_\_YES

3. Was your residence flooded during the (year) flood?

\_\_\_NO \_\_\_YES

4. Before the most recent flood, what would you have said the chance was of major flooding that would cause an evacuation of your neighborhood? (check one)

\_\_\_NO CHANCE

\_\_\_SLIGHT CHANCE

\_\_\_MODERATE CHANCE

\_\_\_STRONG CHANCE

\_\_\_EXTREMELY LIKELY CHANCE

5. Before the flood this year, had your home ever been flooded? (check one)

\_\_\_NO **(SKIP to Q7)** \_\_\_YES

6. Please give me the year that any previous floods occurred, and check whether or not you evacuated your home each time.

YEAR

\_\_\_\_\_\_ \_\_\_ DID NOT EVACUATE \_\_\_EVACUATED

\_\_\_\_\_\_ \_\_\_ DID NOT EVACUATE \_\_\_EVACUATED

\_\_\_\_\_\_ \_\_\_ DID NOT EVACUATE \_\_\_EVACUATED

\_\_\_\_\_\_ \_\_\_ DID NOT EVACUATE \_\_\_EVACUATED

\_\_\_\_\_\_ \_\_\_ DID NOT EVACUATE \_\_\_EVACUATED

**Structural Data**

7. What is the five-digit zip code of this home?

\_\_\_\_\_\_\_\_\_\_\_\_\_

8. What category best describes the style of this building?

(CIRCLE ONE ANSWER)

1. One-Story 5. 1-1/2 Story Finished 9. 3-1/2 Story Finished

2. Two-Story 6. 1-1/2 Story Unfinished 10. 3-1/2 Story Unfinished

3. Three-Story 7. 2-1/2 Story Finished 11. Bi-Level

4. Split Level 8. 2-1/2 Story Unfinished

9. Not counting your basement, attic, or garage, how many square feet of living area are in your home? (If respondent is unsure, ask for the dimensions and calculate.)

\_\_\_\_\_\_\_\_\_\_\_ SQUARE FEET

10. Does your home have a basement? (CIRCLE)

1. NO (Skip to 11)

2. YES

10a. If yes, please indicate the total basement area, in square feet, and the amount that is finished and unfinished? (If respondent is unsure, ask for the dimensions and calculate.)

TOTAL BASEMENT AREA: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ SQUARE FEET

FINISHED BASEMENT AREA: \_\_\_\_\_\_\_\_\_\_\_\_\_ SQUARE FEET

UNFINISHED BASEMENT AREA: \_\_\_\_\_\_\_\_\_\_ SQUARE FEET

11. Do you have a garage on this property? (CIRCLE)

1. NO (Skip to 12)

2. YES

11a. Is the garage attached to the structure? (CIRCLE)

1. NO

2. YES

11b. How large is the garage in square feet? (If respondent is unsure, ask for the dimensions and calculate.)

\_\_\_\_\_\_\_\_\_ SQUARE FEET

12. Do you have a carport? (CIRCLE)

1. NO

2. YES

12a. How large is the carport in square feet? (If respondent is unsure, ask for the dimensions and calculate.)

\_\_\_\_\_\_\_\_\_ SQUARE FEET

13. What category best describes the heating and cooling system in this building?

(CIRCLE ONE ANSWER FOR MOST PROMINENT SYSTEM)

Heating Only:

1. Forced Air 6. Ceiling, Radiant Electric

2. Gravity Furnace 7. Baseboard, Electric

3. Floor Furnace 8. Baseboard, Hot Water

4. Wall Furnace 9. Radiators, Hot Water

(No Heat Ducts) 10. Radiators, Steam

5. Floor, Radiant Hot Water

Heating and Cooling:

11. Warmed and Cooled Air

12. Heat Pump System

Cooling Only:

13. Evaporative Water Cooler (Single or Short Ducts)

14. Refrigerated, with Condenser and Ducts

14. What is the primary exterior wall covering on this building?

(CIRCLE ONE ANSWER)

1. Plywood 4. Siding 7. Common Brick

2. Hardboard 5. Shingle 8. Face Brick

Sheets 6. Masonry 9. Stone

3. Stucco Veneer 10. Concrete Block

15. What is the primary roof covering of this building? (CIRCLE ONE ANSWER)

1. Composition Shingle 5. Concrete Tile 10. Plastic Tile

2. Built-up Rock 6. Clay Tile

3. Wood Shingle 7. Galvanized Metal

(Embedded in Asphalt) 8. Slate

4. Wood Shake 9. Composition Roll

16. How many fireplaces are in this home? \_\_\_\_\_\_\_\_\_ FIREPLACES

\_\_\_\_\_\_\_ FIREPLACES

17. How many square feet of each of the following types of porches are there in this home? (If you are unsure of square feet, please give dimensions.)

Slab \_\_\_\_\_\_\_\_\_\_\_ SQUARE FEET

Or ( \_\_\_\_ Feet X \_\_\_ Feet)

Slab with Roof \_\_\_\_\_\_\_\_\_\_\_ SQUARE FEET

Or ( \_\_\_\_ Feet X \_\_\_ Feet)

Wood Deck \_\_\_\_\_\_\_\_\_\_\_ SQUARE FEET

Or ( \_\_\_\_ Feet X \_\_\_ Feet)

Enclosed Slab Porch \_\_\_\_\_\_\_\_\_\_\_ SQUARE FEET

Or ( \_\_\_\_ Feet X \_\_\_ Feet)

Enclosed Wood Porch \_\_\_\_\_\_\_\_\_\_\_ SQUARE FEET

Or ( \_\_\_\_ Feet X \_\_\_ Feet)

18. Do you have an elevator in your home?

\_\_\_ Yes \_\_\_ No

19. How high is the first floor of your building above the lowest adjacent grade?

\_\_\_\_\_\_\_\_FEET

20. How high is the first floor of your building above the where flood water would first enter your building (from considering windows and pipes into the foundation?

\_\_\_\_\_\_\_\_FEET

**Cost and Damages**

**The next group of questions is to determine flood damages to different types of property from the \_\_\_(year\_\_\_\_\_\_\_ flood.**

21. Please indicate how high in feet and inches that the water was relative to the first

floor of the inside of your home.

\_\_\_\_\_\_FEET; \_\_\_\_\_\_INCHES (ABOVE, BELOW) FIRST FLOOR LEVEL

[CIRCLE]

22. How long did the water remain in this building?

\_\_\_\_\_\_\_\_\_\_\_\_\_ DAYS \_\_\_\_\_\_\_\_\_\_\_\_ HOURS

23. Did the flooding make it necessary for you or other members of your household to stay in temporary residence due to evacuation or while your home was being repaired?

(CIRCLE)

1. NO (Skip to 24)

2. YES

23a. How many days did you spend in temporary residence due to the evacuation or while flood damage to your home was being repaired?

\_\_\_\_\_ DAYS

23b. How much money did your household spend on travel, (beyond your normal travel expense), and lodging (including trailer rental) due to your evacuation(s) for the \_\_\_\_\_\_\_\_\_\_\_ flood?

\_\_\_\_\_\_ DOLLARS

23c. Due to your evacuation, how much money did your household spend on food in excess of what you normally would have spent?

\_\_\_\_\_\_ DOLLARS

24. For each motor vehicle, including cars, trucks, recreational vehicles, boats, and motorcycles, located at this residence during the flood, please indicate the dollar value, whether or not it was moved, the amount of damage to the vehicle, if any, and the level, in feet and inches, that the flood water reached above the bottom of the vehicle’s wheels.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Vehicle  Category and Year  (Categories include: sedan, van, sports utility, sports cars, pickup trucks, and motorcycles) | Dollar Value | Was it Moved?  (Yes or no) | Dollar  Damage | Depth of Water from the Bottom of the Vehicle |
| Vehicle 1: | $ \_\_\_\_\_\_\_\_ | YES NO | $ \_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_ FEET |
| Vehicle 2: | $ \_\_\_\_\_\_\_\_ | YES NO | $ \_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_ FEET |
| Vehicle 3: | $ \_\_\_\_\_\_\_\_ | YES NO | $ \_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_ FEET |
| Vehicle 4: | $ \_\_\_\_\_\_\_\_ | YES NO | $ \_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_ FEET |

**The following questions are to determine the dollar cost and unpaid hours for repair and cleanup of your home, and repair, replacement, and cleanup to the contents of your home that resulted from the \_\_(YEAR)\_\_ flood.**

25. What was the cost of the structural damage to your home resulting from the (Year) flood? (Structural damage is defined as damage to any building components; including foundation, walls, floors, windows, roof, electrical systems, heating and cooling systems, plumbing, attached carpeting, attached shelves and cabinets, and built-in equipment and appliances.)

$\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

25a. Which of the following is the primary source of your structure damage repair cost?

(circle one)

1. Contractor estimate (before repairs)
2. Contractor invoice (after repairs)
3. Your own assessment
4. Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

25b. What was the dollar cost to you for labor and supplies to clean up your home after the flood?

$\_\_\_\_\_\_\_\_

25c. What was the total number of unpaid hours that you and others spent on repair and cleanup to your home after the flood?

\_\_\_\_\_\_ UNPAID HOURS

|  |  |
| --- | --- |
| 26. a. | Please list your total real estate damages into the following categories. |
| b. | Please also itemize any additional time that was spent on repairs other than paid labor hours. |

|  |  |  |  |
| --- | --- | --- | --- |
| **Area of Damage** | **Value of Damages** | | |
|  | In % of total  Or  in dollars | | Unpaid Hours to repair or install, **in addition** to $ spent |
| 1. Built-in shelves and appliances | % | $ | \_\_\_\_\_\_\_\_ UNPAID HOURS |
| 2. Electrical | % | $ | \_\_\_\_\_\_\_\_ UNPAID HOURS |
| 3. Plumbing | % | $ | \_\_\_\_\_\_\_\_ UNPAID HOURS |
| 4. Exterior walls, windows, doors (painting included), and roofing | % | $ | \_\_\_\_\_\_\_\_ UNPAID HOURS |
| 5. Footings and foundation | % | $ | \_\_\_\_\_\_\_\_ UNPAID HOURS |
| 6. Interior doors and walls (painting included) | % | $ | \_\_\_\_\_\_\_\_ UNPAID HOURS |
| 7. Interior floors, carpet and ceilings | % | $ | \_\_\_\_\_\_\_\_ UNPAID HOURS |
| 8. Mechanical systems - heat, A/C, sump pump, built-in vacuum | % | $ | \_\_\_\_\_\_\_\_ UNPAID HOURS |
| 9. Outbuildings, decks, fireplaces and garages | % | $ | \_\_\_\_\_\_\_\_ UNPAID HOURS |
| 10. Outside property and landscaping | % | $ | \_\_\_\_\_\_\_\_ UNPAID HOURS |
| 11. Septic, sewer, and water systems | % | $ | \_\_\_\_\_\_\_\_ UNPAID HOURS |
| Total | 100 % | $ | \_\_\_\_\_\_\_\_ UNPAID HOURS |

**CONTENT DAMAGE**

**Content damage refers to damage to personal property kept inside the home or the garage that is not permanently affixed to the home.**

27. What was the dollar cost of flood damage to the contents of your home, garage, and shed, excluding motor vehicles? (Only include content replacement and repairs, do not include repairs to the structure of the house).

$\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

28. What was the total number of unpaid hours that you and others spent on repair of appliances, furniture, and other contents of your home?

\_\_\_\_\_\_ UNPAID HOURS FOR CONTENT REPAIR

29. How much, if anything, did each of the following cost you in actual dollar expenditures as a result of the \_\_(YEAR)\_\_ flood?

a) Costs for moving furniture and other belongings? $\_\_\_\_\_\_\_\_\_\_

b) Costs for storing furniture and other belongings? $\_\_\_\_\_\_\_\_\_\_

c) Vandalism, looting, or theft costs? $\_\_\_\_\_\_\_\_\_\_

d) Costs from flooding-related medical problems? $\_\_\_\_\_\_\_\_\_\_

e) Any other costs due to the \_\_\_\_\_\_\_ flood. $\_\_\_\_\_\_\_\_\_\_

Describe: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Flood Warning and Response**

**30**. Just before this year’s flood, did anyone at this residence hear from anyone or receive any other communication that flooding was possible? (CHECK ONE)

\_\_\_NO **(SKIP to Q48)** \_\_\_YES

31. Did the FIRST such message that you received include any of the following information?

a) "Conditions are possible for a flood in your community." 1. NO 2. YES

b) "Watch the river or stream for flooding." 1. NO 2. YES

c) "It's possible your home will be flooded." 1. NO 2. YES

d) "Flooding will occur; take action." 1. NO 2. YES

e) "Evacuate your home." (no instructions) 1. NO 2. YES

f) "Evacuate your home." (with instructions) 1. NO 2. YES

g) The time that flooding would occur. 1. NO 2. YES

h) Other information in the message. 1. NO 2. YES

(Specify:)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

32. What would you call this first message that you received? (circle one)

1. A FLOOD WATCH

2. A FLOOD WARNING

3. NEITHER ONE

4. UNSURE

33. On what date and at what time of day did you hear this message?

MO. DAY TIME (Hours and Minutes):

\_\_/ \_\_/ \_\_:\_\_\_ (circle one): AM or PM

34. How did you receive this first message? (CIRCLE ONLY ONE)

1. E-MAIL
2. TEXT MESSAGE
3. TWITTER
4. WEBSITE
5. TV
6. RADIO
7. TELEPHONE BY A PUBLIC OR EMERGENCY WORKER
8. TELEPHONE BY OTHER
9. FACE TO FACE BY PUBLIC OR EMERGENCY WORKER
10. FACE TO FACE BY OTHER
11. LOUDSPEAKER
12. SIREN
13. C.B., HAM RADIO or POLICE SCANNER
14. NEWSPAPER
15. OBSERVING THE CREEK OR RIVER WATER LEVELS
16. OTHER \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

35. On what date, and at what approximate time, did the flood waters reach your property? [Put a Number on each Blank or Check [ ] if DON'T KNOW]

DATE TIME (Hours and Minutes):

\_\_\_\_\_\_\_\_\_\_ \_\_: \_\_\_ (circle one): AM or PM

[ ] DON'T KNOW

36. **Of each of the following actions, please answer yes or no to each to indicate the actions that you took, if any, as a result of this first message you heard. Remember that these are only actions with respect to the first message you heard.**

[CIRCLE YES OR NO FOR EACH.]

In response to the first message did you :

a) Listen to TV or Radio? 0. NO 1. YES

b) Contact family members? 0. NO 1. YES

c) Contact other people? 0. NO 1. YES

d) Disconnect appliances? 0. NO 1. YES

e) Pack or prepare any household possessions

for an evacuation? 0. NO 1. YES

f) Elevate possessions above the floor of the first

story of your house? 0. NO 1. YES

g) Move any possessions to a safer location

outside of the house? 0. NO 1. YES

h) Go out and look at the stream? 0. NO 1. YES

I) Move cars or other vehicles to higher ground? 0. NO 1. YES

j) Evacuate from the structure? 0. NO 1. YES

k) Take any other actions? (if yes, list below) 0. NO 1. YES

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

37. On a scale of 1 to 10 how would you estimate the strength of your belief in this first message? (1 represents total disbelief and 10 represents total belief)

­­­\_\_\_\_\_\_\_\_\_\_ (fill-in with number between 1-10)

38. The previous questions asked about the first message you received. Did you receive a **DIFFERENT MESSAGE LATER ON** indicating that flooding was possible or the possibility of flooding had increased?

0. NO **If No, SKIP to Q 48**

1. YES

39. Did the SECOND message that you received include any of the following information?

a) "Conditions possible for a flood

in your community." 0. NO 1. YES

b) "Watch the river or stream for flooding." 0. NO 1. YES

c) "It is possible your home will be flooded." 0. NO 1. YES

d) "Flooding will occur; take action." 0. NO 1. YES

e) "Evacuate your home." (no instructions) 0. NO 1. YES

f) "Evacuate your home." (with instructions) 0. NO 1. YES

g) The time that flooding would occur. 0. NO 1. YES

h) Other information in the message. 0. NO 1. YES

(Specify:)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

40. What would you call this SECOND message that you received? (circle one)

1. A FLOOD WATCH

2. A FLOOD WARNING

3. NEITHER ONE

4. UNSURE

41. On what date, and what time of day did you hear this message?

MO. DAY TIME (Hours and Minutes):

\_\_/ \_\_/ \_\_:\_\_\_ (circle one): AM or PM

42. How did you hear this SECOND message? (circle one only)

1. E-MAIL
2. TEXT MESSAGE
3. TWITTER
4. WEBSITE
5. TV
6. RADIO
7. TELEPHONE BY A PUBLIC OR EMERGENCY WORKER
8. TELEPHONE BY OTHER
9. FACE TO FACE BY PUBLIC OR EMERGENCY WORKER
10. FACE TO FACE BY OTHER
11. LOUDSPEAKER
12. SIREN
13. C.B., HAM RADIO or POLICE SCANNER
14. NEWSPAPER
15. OBSERVING THE CREEK OR RIVER WATER LEVELS
16. OTHER \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

43. Please answer yes or no to each to indicate which of the following actions, if any, that you took as a result of this SECOND message that you heard.

[CIRCLE YES OR NO FOR EACH.]

In response to the second message did you :

a) Listen to TV or Radio? 0. NO 1. YES

b) Contact family members? 0. NO 1. YES

c) Contact other people? 0. NO 1. YES

d) Disconnect appliances? 0. NO 1. YES

e) Pack or prepare any household possessions for

evacuation? 0. NO 1. YES

f) Elevate possessions above the floor of the first story

of your house? 0. NO 1. YES

g) Move any possessions to a safer location outside

of the house? 0. NO 1. YES

h) Go out and look at the stream? 0. NO 1. YES

I) Move cars or other vehicles to higher ground? 0. NO 1. YES

j) Did the SECOND message cause you to evacuate

from the structure? 0. NO 1. YES

k) Did the SECOND message cause you to take

any other actions? (If yes, list below) 0. NO 1. YES

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_­­­­­­

44. On a scale of 1 to 10 how would you estimate the strength of your belief in this second message? (1 = total disbelief, and 10 = total belief)

­­­\_\_\_\_\_\_\_\_\_\_ (fill-in with number between 1-10)

45. After receiving the second message, did you receive any later messages that caused you to take further action?

0. NO **If No, SKIP to Q 48**.

1. YES

2. UNSURE

46. Please describe the (those) later message(s).

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

47. What additional actions, if any, did you take as a result of hearing the (those) later message(s)?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**->48**. Do you have any suggestions on ways to improve the current flood warning system?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

49. For each of the following categories, please tell me the total number of people who were in the residence, the number who did evacuate, and the number who did not: **(Put a Number or Zero on each Blank)**

EVAC- DID

TOTAL UATED NOT

a) Household members under 13: \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

b) Household members 13-64 yrs. old: \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

c) Household members 65 and over: \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

--------------------------------------------------------------------

d) Non-household members < 13: \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

e) Non-household members 13-64 yrs. old: \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

f) Non-household members 65 and over: \_\_\_­­­­\_\_ \_\_\_\_\_ \_\_\_\_\_

**[SKIP to Q 54 , if no one evacuated.]**

50. During the flooding this year, how many people evacuated from your household using each of the following modes of transportation?

[Put a Number or Zero on each blank.]

Number Evacuating

a) CAR OR TRUCK? \_\_\_\_\_\_\_\_

b) BOAT? \_\_\_\_\_\_\_\_

c) WALKING? \_\_\_\_\_\_\_\_

d) OTHER TRANSPORTATION? \_\_\_\_\_\_\_\_

(What kind?)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

51. For you and others who decided to evacuate from your residence, which of the following affected the decision to evacuate? Please answer yes or no to each.

[CIRCLE YES OR NO FOR EACH.]

Did you evacuate because of:

a) Messages on TV or Radio? 0. NO 1. YES

b) A telephone message from friends or relatives? 0. NO 1. YES

c) A face to face message from friends or relatives? 0. NO 1. YES

d) Telephone messages from local officials? 0. NO 1. YES

e) Face to face messages from local officials? 0. NO 1. YES

f) Experience you or other residents had with floods

in previous years? 0. NO 1. YES

g) High stream level or flood waters close to

your residence? 0. NO 1. YES

h) Because it was physically impossible to remain

in the structure? 0. NO 1. YES

I) To find or meet family members? 0. NO 1. YES

j) Because the neighbors were evacuating? 0. NO 1. YES

k) Other Reason(s) for Decision to Evacuate? 0. NO 1. YES

[Probe for Reasons]\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

52. On what date, and at what time of day, did you last leave your house to go to a place of safety?

Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

MO. DAY TIME (Hours and Minutes):

\_\_/ \_\_/ \_\_:\_\_\_ (circle one): AM or PM

53. How much time did it take in your evacuation to get out of the area of flood danger?

[Put a Number or a Zero on each Blank]

\_\_\_\_\_HOURS; \_\_\_\_\_\_MINUTES

Check Box if everyone evacuated [ ], **and SKIP to Q31**.

**->54**. If you and others did NOT evacuate when warned, which of the following affected your decision NOT to evacuate or to delay doing so?

[CIRCLE YES OR NO FOR EACH.]

a) Did not believe messages on TV or Radio? 0. NO 1. YES

b) Telephone message from friends or relatives? 0. NO 1. YES

c) Face to face message from friends or relatives? 0. NO 1. YES

d) Telephone messages from local officials? 0. NO 1. YES

e) Face to face messages from local officials? 0. NO 1. YES

f) Experience you or other residents had with floods in

previous years? 0. NO 1. YES

g) Location of flood waters in relation to the residence? 0. NO 1. YES

h) Because it was physically impossible to

leave the structure? 0. NO 1. YES

I) Because of the location of your family members? 0. NO 1. YES

j) Because the neighbors were not evacuating? 0. NO 1. YES

k) Fear of looting? 0. NO 1. YES

l) Other Reason(s) for Not Evacuating? 0. NO 1. YES

[specify]\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**The next question is to determine how you learned about the approaching flood and how you responded at the time.**

55. What actions, if any, did you take to safeguard your property immediately prior to

flooding and what were the damages prevented by each action?

(PLEASE CIRCLE ALL THAT APPLY AND INDICATED THE DOLLARS DAMAGES PREVENTED FOR EACH ACTION.)

|  |  |  |  |
| --- | --- | --- | --- |
| **Damage Preventive Action**  **(CIRCLE ALL THAT APPLY)** | **$ Damage Prevented** | **Hours Spent on Damage Prevention** | **Cost of Materials for Prevention** |
| 1. Moved contents to higher ground | $\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_ HOURS | $\_\_\_\_\_\_\_\_\_\_\_ |
| 2. Elevated contents to a higher spot in the building | $\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_ HOURS | $\_\_\_\_\_\_\_\_\_\_\_ |
| 3. Turn off electrical equipment | $\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_ HOURS | $\_\_\_\_\_\_\_\_\_\_\_ |
| 4. Sandbagged the outside of the building | $\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_ HOURS | $\_\_\_\_\_\_\_\_\_\_\_ |
| 5. Used another type of temporary barrier | $\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_ HOURS | $\_\_\_\_\_\_\_\_\_\_\_ |
| 6. Moved vehicles to higher ground | $\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_ HOURS | $\_\_\_\_\_\_\_\_\_\_\_ |
| 7. Other action \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | $\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_ HOURS | $\_\_\_\_\_\_\_\_\_\_\_ |
| 8. None |  |  |  |

**ROADWAY DAMAGE**

The purpose of this survey is to gain information from area transportation agencies on economic losses due to roadway flooding. These estimates will be used by the Corps of Engineers in economic evaluations. Please provide any information based on damage that occurred (DATE). Note: some questions ask for total cost or number of 8-hour man-days, while others ask for material and labor. Thank you for your participation.

1. How many miles of roadway damage did your jurisdiction experience during the (DATE) flood?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ MILES

2. Please estimated cost of roadway repairs following the (DATE) flood:

2a. Cost to repair erosion to roadway embankment:

$\_\_\_\_\_\_\_\_\_\_\_\_

2b. Cost to repair roadway pavement:

$\_\_\_\_\_\_\_\_\_\_\_\_

2c. Cost to repair roadway shoulder:

$\_\_\_\_\_\_\_\_\_\_\_\_

3. Please estimate the costs to monitor roadways for flooding/safety impacts and alert public and agencies affected by an event: $\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_man-days

4. Please estimate the costs associated with installation and removal of detour signs and road barricades for the flood roadways in your jurisdiction: $\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_man-days.

5. Please estimate the costs of flood protection and other operations provided during the (DATE) flood:

5a. Sandbagging $ \_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_ man-days (includes installation, operation, removal and disposal)

5b. pumping materials $\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_ man-days of

6. Please estimated costs of post-flood roadway clean-up the (DATE) flood:

6a. street and gutter sweeping: $\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_man-days

6b. cleaning of drainage structures $\_\_\_\_\_\_total or \_\_\_\_\_\_\_\_ man days.

7. Please estimate the costs of additional maintenance activities for scour of critical bridges and culverts following the (DATE) flood:

7a. inspection costs: $\_\_\_\_\_\_\_\_\_total or \_\_\_\_\_\_ man days (per structure)

7b. scour protection measures $ \_\_\_\_\_\_\_ of materials and \_\_\_\_\_\_ man days

7c. debris removal on piers/abutments: $\_\_\_\_\_\_\_\_ of materials and \_\_\_\_\_\_\_man-days (per structure)